

Solutions – Extended Binomial Theorem (A)

Expand $(1 + 3x)^{-1}$ in ascending powers of x up to the x^2 term.

$$1 - 3x + 9x^2$$

Expand $(1 + 2x)^{-1/2}$ in ascending powers of x up to the x^2 term.

$$1 - x + 1.5x^2$$

Expand $(1 - 3x)^{-3}$ in ascending powers of x up to the x^2 term.

$$1 + 9x + 54x^2$$

Solutions – Extended Binomial Theorem (B)

Expand $(1 + 2x)^{-3/2}$ in ascending powers of x up to the x^2 term.

$$1 - 3x + 7.5x^2$$

Expand $(1 - x)^{-1}$ in ascending powers of x up to the x^2 term.

$$1 + x + x^2$$

Expand $(1 + x)^{-1/2}$ in ascending powers of x up to the x^2 term.

$$1 - 0.5x + 0.375x^2$$

Solutions – Extended Binomial Theorem (C)

Expand $(1 + x)^{-2}$ in ascending powers of x up to the x^2 term.

$$1 - 2x + 3x^2$$

Expand $(1 - 2x)^{-3}$ in ascending powers of x up to the x^2 term.

$$1 + 6x + 24x^2$$

Expand $(1 - x)^{1/2}$ in ascending powers of x up to the x^2 term.

$$1 - 0.5x - 0.125x^2$$

Solutions – Extended Binomial Theorem (D)

Expand $(1 + 2x)^{3/2}$ in ascending powers of x up to the x^2 term.

$$1 + 3x + 1.5x^2$$

Expand $(1 + 2x)^{-1}$ in ascending powers of x up to the x^2 term.

$$1 - 2x + 4x^2$$

Expand $(1 - 2x)^{-1/2}$ in ascending powers of x up to the x^2 term.

$$1 + x + 1.5x^2$$

Solutions – Extended Binomial Theorem (E)

Expand $(1 + 3x)^{3/2}$ in ascending powers of x up to the x^2 term.

$$1 + 4.5x + 3.375x^2$$

Expand $(1 - 3x)^{-1}$ in ascending powers of x up to the x^2 term.

$$1 + 3x + 9x^2$$

Expand $(1 + 2x)^{1/2}$ in ascending powers of x up to the x^2 term.

$$1 + x - 0.5x^2$$

Solutions – Extended Binomial Theorem (F)

Expand $(1 - 3x)^{3/2}$ in ascending powers of x up to the x^2 term.

$$1 - 4.5x + 3.375x^2$$

Expand $(1 + x)^{1/2}$ in ascending powers of x up to the x^2 term.

$$1 + 0.5x - 0.125x^2$$

Expand $(1 - 3x)^{-1}$ in ascending powers of x up to the x^2 term.

$$1 + 3x + 9x^2$$

Solutions – Extended Binomial Theorem (G)

Expand $(1 - 2x)^{3/2}$ in ascending powers of x up to the x^2 term.

$$1 - 3x + 1.5x^2$$

Expand $(1 - x)^{-2}$ in ascending powers of x up to the x^2 term.

$$1 + 2x + 3x^2$$

Expand $(1 + x)^{1/2}$ in ascending powers of x up to the x^2 term.

$$1 + 0.5x - 0.125x^2$$

Solutions – Extended Binomial Theorem (H)

Expand $(1 - 3x)^{-3}$ in ascending powers of x up to the x^2 term.

$$1 + 9x + 54x^2$$

Expand $(1 - 2x)^{-1/2}$ in ascending powers of x up to the x^2 term.

$$1 + x + 1.5x^2$$

Expand $(1 + 3x)^{-2}$ in ascending powers of x up to the x^2 term.

$$1 - 6x + 27x^2$$

Solutions – Extended Binomial Theorem (I)

Expand $(1 - 2x)^{-1/2}$ in ascending powers of x up to the x^2 term.

$$1 + x + 1.5x^2$$

Expand $(1 + 2x)^{-3}$ in ascending powers of x up to the x^2 term.

$$1 - 6x + 24x^2$$

Expand $(1 + 2x)^{-1}$ in ascending powers of x up to the x^2 term.

$$1 - 2x + 4x^2$$

Solutions – Extended Binomial Theorem (J)

Expand $(1 - 2x)^{-1/2}$ in ascending powers of x up to the x^2 term.

$$1 + x + 1.5x^2$$

Expand $(1 + 2x)^{-2}$ in ascending powers of x up to the x^2 term.

$$1 - 4x + 12x^2$$

Expand $(1 + 3x)^{3/2}$ in ascending powers of x up to the x^2 term.

$$1 + 4.5x + 3.375x^2$$